

REMARKS

This application has been amended in a manner that is believed to place it in condition for allowance at the time of the next Official Action.

Claims 1-2 and 4-21 are pending in the application. Claim 1 has been amended to incorporate the recitations of claim 3. New claims 12-21 have been added. Support for new claims 12-17 may be found in original claims 1 and 3-6. Claims 2 and 7-11 are withdrawn. Claim 3 has been canceled.

Claims 1 and 4-6 were rejected under 35 USC §112, first paragraph, for allegedly not satisfying the written description requirement. This rejection is traversed.

As noted above, claim 1 has been amended to incorporate the subject matter of claim 3. Accordingly, it is believed that independent claim 1 and corresponding dependent claims 4-6 satisfy the written description requirement.

Claims 1 and 3-6 were rejected under 35 USC §112, first paragraph, for allegedly not satisfying the enablement requirement. This rejection is traversed.

Applicants respectfully submit that one skilled in the art would be able to practice the claimed invention. In view of the state of the art of recombinant techniques and the teachings of the specification, one of ordinary skill in the art would have been capable of performing any modifications that would have been necessary to practice the claimed invention. Beginning on page

5, the specification discusses in detail the conditions and modifications needed to produce fructan material. Furthermore, as the Examiner is aware, modifications or even deletions in the N-terminal part of the protein usually do not inactivate the protein. Thus, one skilled in the art would be able to make the necessary modifications, yet still retain the required activity level of the protein and desired utility.

While the Official Action contends that the claims encompasses an "extremely large number" of Lactobacillus strains and fructosyltransferase enzymes, the claims recite that the bacterial strain contains and expresses a protein having such activity. Thus, bacterial strains that do not contain and express the recited protein having fructosyltransferase activity fall outside the scope of the claim. In this regard, one skilled in the art would have readily been able to determine which embodiments were conceived and enabled with the expenditure of no more effort than is the normally required in the art.

Indeed, when practicing the claimed method, one skilled in the art would consistently apply the same steps of subjecting the strain in question to the production conditions and then checking the production of fructans. Alternatively, one skilled in the art can introduce by recombinant techniques the protein encoding gene into a Lactobacillus strain.

The Examiner's attention is also respectfully directed to U.S. Patent Nos. 6,635,460 and 6,730,502. Both patents issued

from parent applications relating to the present application. In addition, both patents contain claims which recite proteins having at least an "85% amino acid identity", as determined by a BLAST algorithm, with a particular amino acid sequence. Accordingly, the Patent Office has already considered similar sequences reciting an "85% amino acid identity" as enabled.

Thus, while applicants note with appreciation the indication that the disclosure is enabling for methods of producing levan using *Lactobacillus reuteri* strain 121 or a microorganism transformed with a nucleic acid encoding the levansucrase SEQ ID NO: 11, it is believed that the current claims plainly satisfy the enablement requirement. Indeed, as the Examiner is aware, as long as the specification discloses at least one method for practicing the claimed invention that bears a reasonable correlation to the entire scope of the claim, then the enablement requirement of 35 U.S.C. 112 is satisfied. In re Fisher, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970). Failure to disclose other methods by which the claimed invention may be made does not render a claim invalid under 35 U.S.C. 112. Spectra-Physics, Inc. v. Coherent, Inc., 827 F.2d 1524, 1533, 3 USPQ2d 1737, 1743 (Fed. Cir.), cert. denied, 484 U.S. 954 (1987).

In view of the above, applicants respectfully submit that the claimed invention is fully supported by the present disclosure.

Claims 1, 3 and 6 were rejected under 35 USC §102(b) as allegedly being anticipated by either VAN GEEL-SCHUTTEN et al. (1998) or VAN GEEL-SCHUTTEN et al. (1999). Claims 4 and 5 were rejected under 35 USC §103(a) as allegedly being unpatentable over either VAN GEEL-SCHUTTEN et al. (1999) or VAN GEEL-SCHUTTEN et al. (1998). These rejections are respectfully traversed.

The (1999) reference does not qualify as prior art. The present application is a continuation-in-part application of US Application Serial No. 09/995,587, filed on November 29, 2001, which is a continuation-in-part application of US Application Serial No. 09/604,958, filed on June 28, 2000, which claims priority from European Application No. 00201872.9 filed on May 25, 2000. The (1999) reference was published in July of 1999. Thus, the (1999) reference was published by the current inventors less than 12 months before the present filing date and can not constitute prior art under 35 USC §102(b).

Applicants further note that Gerritidina Hendrika VAN GEEL-SCHUTTEN and Lubbert DIJKHUISEN are co-authors of the 1999 publication. The work disclosed in that article now appears in the present application. Accordingly, the article merely describes applicant's own work and does not qualify as prior art under any other provisions of 35 USC 102.

Nevertheless, applicants note that neither the VAN GEEL-SCHUTTEN et al. (1998) nor the VAN GEEL-SCHUTTEN et al. (1999) publications teach or suggest subjecting a fructose source

to a *Lactobacillus* strain under non-growth conditions, isolating the recited fructans, or adding the recited fructans to a food product as recited in the claimed invention (e.g., see present specification pg. 7).

At best, one skilled in the art would derive from these publications that the particular *Lactobacilli* were grown in MRS media and produced some undefined fructose-containing polysaccharides. There is no indication that under non-growth conditions (i.e. implying the absence of an MRS-type medium and only the presence of a fructose source such as sucrose) that the strains would be capable of producing a polysaccharide, let alone a fructan-containing polysaccharide as recited in the claimed invention. Indeed, VAN GEEL-SCHUTTEN et al. (1998) only discuss exopolysaccharides in general.

Accordingly, there is no teaching to isolate the fructans or to add the fructans to a food composition (e.g., claims 4-5, 13-14, 16-17 and 18-21). Thus, it can not be said that one skilled in the art would possess the motivation to combine and modify the teachings of the publications to obtain the claimed invention.

The publications are also completely silent about the nature of the enzymes responsible for the production of the fructose-containing polysaccharides.

In view of the above, it is believed that neither of the VAN GEEL-SCHUTTEN et al. publication anticipate or render obvious the claimed invention.

This rejection is respectfully traversed.

Claims 1 and 3-6 were rejected on the grounds of non-statutory obviousness-type double patenting as allegedly being unpatentable over claims 7 and 8 of U.S. Patent No. 6,730,502. This rejection is respectfully traversed.

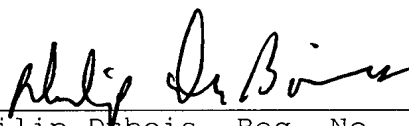
As noted above, the present claims recite steps of subjecting a fructose source to a *Lactobacillus* strain under non-growth conditions, isolating the recited fructans, and/or adding the recited fructans to a food product. As these recitations are not disclosed in claims 7 and 8 of U.S. Patent No. 6,730,502, it cannot be said that claims 1 and 3-6 would be obvious in view of claims 7 and 8 of U.S. Patent No. 6,730,502.

In view of the present amendment and the foregoing remarks, therefore, applicants believe that the present application is in condition for allowance at the time of the next Official Action. Allowance and passage to issue on that basis is respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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